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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,153	04/16/2004	Erik C. Scher	01-002001	8584
33140	7590	09/24/2009		
NANOSYS INC. 2625 HANOVER ST. PALO ALTO, CA 94304				
EXAMINER				
NIGIN, RUSSELL SCOTT				
ART UNIT		PAPER NUMBER		
1631				
NOTIFICATION DATE		DELIVERY MODE		
09/24/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@nanosysinc.com

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

10/826,153

**Applicant(s)**

SCHER ET AL.

**Examiner**

RUSSELL S. NEGIN

**Art Unit**

1631

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 14 August 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 26-37, 40-42, 44-48 and 60-63.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Marjorie Moran/  
Supervisory Patent Examiner, Art Unit 1631

Continuation of 11, does NOT place the application in condition for allowance because:

Applicant's arguments filed 14 August 2009 have been fully considered but they are not persuasive.

Applicant begins by arguing on page 8 of the Remarks that while Bruchez et al. may teach a plurality of nanocrystals, Bruchez et al. does not teach or suggest a plurality of different nanocrystals. As discussed in the Office action of 11 June 2009 and reiterated here, the passage in the abstract stating "...more than one semiconductor nanocrystal... each of which emits at a distinct wavelength" and the alleged "boilerplate" language in Bruchez et al. [column 8, lines 43-50] teach MIXTURES of nanocrystals. Absent any evidence from applicant, the noun "mixture" is interpreted to constitute a combination of different things; consequently, Bruchez et al. teaches a plurality of different nanocrystals.

Applicant next argues that the prior art of Bruchez et al. and Mahamuni et al. teach separate emission spectra of separate species of nanocrystal. In other words, applicant is arguing that neither piece of prior art teaches "emissions of the [mixed] population of nanocrystals." This argument is not persuasive. First, applicant is inserting words into the claim that are not present in the pending version of the claims. In other words, the adjective "mixed" is not present in the pending claims such that an emissions population of nanocrystals could be interpreted to encompass emissions of different species of separated nanocrystals. Second, by using the adjective "mixed," applicant appears to acknowledge that the passage in column 8, lines 43-50 of Bruchez et al. corresponds to different species of nanocrystals that are put (mixed) together. If so, this is in direct contradiction to both what is argued in the previous argument above and applicant's arguments in the middle paragraph of page 9 of the Remarks, and is somewhat confusing.

Applicant further argues with regard to Mahamuni et al. that since only ZnO quantum dots are taught, Mahamuni et al. does not teach "emissions of the [mixed] population comprise different wavelengths or different wavelength intensities when alternately excited with different excitation wavelengths." Again, applicant is arguing limitations that are not present in the pending claims. Furthermore, the combination of Bruchez et al. and Mahamuni et al. teach this recited limitation as previously set forth and reiterated above. Applicant continues to argue on page 9 of the Remarks that emissions of a mixed population of different nanocrystals is different from separate distinct emissions of separate nanocrystals. This argument is not persuasive because the claims recite "population" and not "mixed population." Additionally, even assuming en arguendo that the population recited is a "mixed population", column 8, lines 44-50 of Bruchez et al. teach experimenting with a mixed population of nanocrystals. Consequently, the combination of prior art references makes obvious the claimed invention.

Applicant additionally argues that the reference of Bruchez et al. (which is assumed by applicant en arguendo to teach a mixture of different nanocrystals for only this argument) would not function with the reference of Mahamuni et al., which teaches a single species of nanocrystals. Applicant argues that spectra of different species of nanocrystals are not additive when mixed into a single spectrum. Therefore, there would be no reasonable expectation for success in combining the references. Additionally, one of ordinary skill in the art would not be motivated to combine Bruchez et al. with Mahamuni et al. These arguments are not persuasive because as explained on page 9 of the Office action of 11 June 2009, the motivation to combine Bruchez et al. with Mahamuni et al. is that the alternation of excitation wavelengths taught in Mahamuni et al. results in more informative spectra than spectra of Bruchez et al. Additionally, there would have been a reasonable expectation of success in combining the references because both Bruchez et al. and Mahamuni et al. pertain to analogous quantum dots and nanocrystals, therefore the use of alternating wavelengths in Mahamuni et al. is generally applicable to the mixtures of quantum dots in Bruchez et al.

Applicant further argues that column 23, lines 50-60 of Bruchez et al. only teach contact of antibodies with animals and not nanocrystals with animals. This argument is not persuasive because column 23, lines 29-38 suggest the use of nanocrystals for interactions with antibodies (which are in turn put into animals).

Applicant further argues that the additional references used in the rejections of the previous Office do not overcome the alleged deficiencies of Bruchez et al. and Mahamuni et al. This argument is not persuasive because the combination of references teaches all of the limitations recited in the instant set of rejected claims.